



## 4KS half cylinder with ABUS padlock 86TI/45

SKU EV.4KS.HZ.ABUS.VH86TI45

EVVA 4KS (4 Curve System) is the most resistant system among mechanical locking systems. With its patented springless curve technology, 4KS is suitable for the toughest applications such as high up in the mountains or in production plants with high levels of dirt. The reversible key offers a comfortable insertion behaviour and turns easily and quietly in the cylinder. Of course, 4KS also has an EVVA-own feature: the overlapping curve milling. This guarantees maximum security and prevents key manipulation within the locking system.

The patented reversible key system is suitable for highly complex structured locking systems.

### Measurements

- standard shackle height: 32,5 mm
- shackle: Ø 8 mm
- case width: 46,5 mm
- length half cylinder: 32/10 mm

### Technical characteristics

- springless technology
- locking authorisation query in at least 18 query positions (authorisation positions)
- 12 springless, massive locking pins are brought into a specific position via positive control of the six key curves and scanned by 2 control bars
- locking strip in the core controls the additional coding of the key
- cylinder with carbide drilling protection in core and body
- picking and scanning protection
- impact key protection
- cylinder with pulling protection through chrome-nickel connecting axle
- locking path 90°
- certified according to DIN EN 1303:2015 160B0C6D
- patent protection until 2035

### Execution

- reversible key system
- vertical, easy key insertion
- massive lock body made of TITALIUM™, special aluminium - high security at low weight
- cylinder body: brass matt nickel plated, cylinder core: base material nickel silver
- all query elements with Triflon coated
- with hardened steel shackle with special NANO protect coating for very high corrosion protection
- key can only be removed when closed, positively locked by locking path
- shackle locked on both sides
- 86TI/45: forced locking with 45° position of cam
- combination with electronic locking system possible

### Options / Special equipment

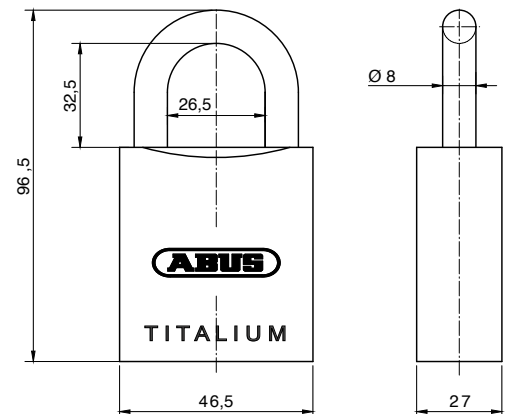
- different shackle height (39,5 mm = 86TI/55)
- seawater resistance for half cylinder \*

### Operational area

- indoor, conditionally for outdoor usage
- simple doors that are locked with a latch
- roller shutters, cabinet systems, barrier fences
- cellar and lattice boxes, sheds, chain lock, etc.
- very large properties with a complex locking system structure and a large number of different user groups (EVVA's extensive expansion capability is included in the planning)
- industrial enterprise, universities, large retail chains
- cultural and leisure facilities

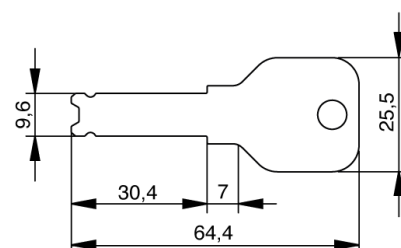
### Scope of delivery

- ABUS padlock 86TI/45 with EVVA half cylinder incl. 3 or more keys
- security card (EVVA)



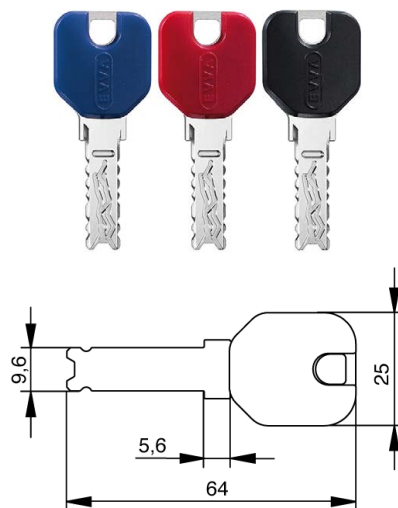
### Key

- key thickness: 2,2 mm
- reversible key made of special resistant nickel silver alloy
- more stable and ergonomic due to the new bow shape
- more compact due to shortened key tip
- highest wear resistance
- overlapping curve milling protects against key manipulation and ensures maximum safety
- easy key insertion through uniquely rounded key tip
- optional: key with design cap \*, key with coloured dot \*, key with extended key neck \*
- the original 4KS key is produced exclusively by EVVA and is only available from an EVVA partner.
- The fourth hidden curve: one of the three curves on one side runs asymmetrically on the other side. It is the hidden fourth curve that gives the 4KS its name.



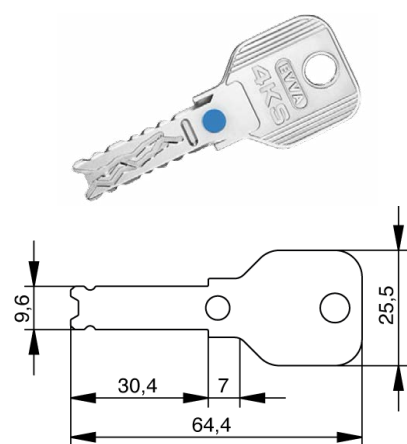
### Key with design cap

- colours: black, blue and red, yellow, green and white
- material thickness design cap: 7,2 mm
- plastic caps for special design requirements for the keys
- ergonomic design and high quality for better haptics
- easy optical differentiation
- simple management of locking systems through colour assignment
- consecutive numbering of the key (key with the same locking authorisation receives a consecutive number)
- use exclusively for EVVA keys
- factory assembly, subsequent opening and retrofitting is not possible



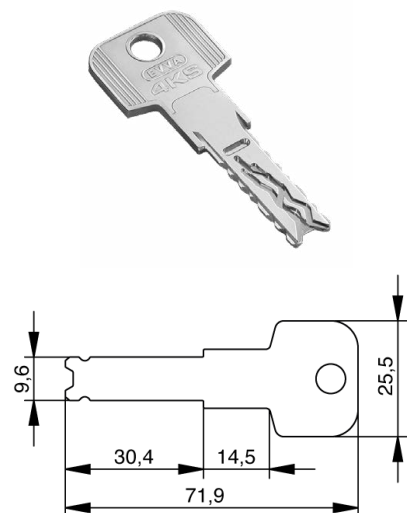
### Key with coloured dot

- colours: red, blue, green, yellow, brown, black, violet, pink
- with countersunk colour dot on the key neck
- for optical differentiation
- colour dot may differ from the image on the website



### Key with extended key neck

- specially shaped key
- for use with armoured fittings

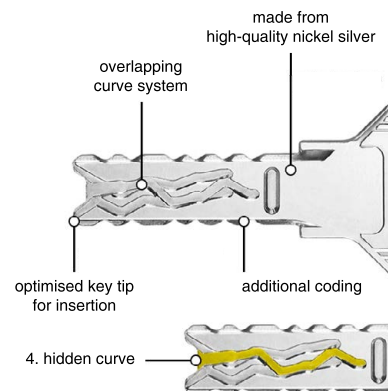


## Technical details

Unlike other locking systems, the locking elements in the 4KS cylinder move along the curves on the key. They are no longer pressed against a spring force. A total of 12 springless, massive locking pins are brought into a specific position via positive control of the six key curves and scanned by two control bars. A locking bar in the core controls the additional coding of the key. In total, the 4KS key is interrogated four times. This is 3 queries more than with other systems and offers maximum security.

### The fourth hidden curve

One of the three curves on one side runs asymmetrically on the other side. It is the hidden fourth curve that gives the 4KS its name.



## Locking cylinder security

The innovative technologies of the 4KS cylinder offer sustainable protection against illegal opening methods:

- **Picking and scanning protection**

The 4KS cylinder is equipped with several locking pins. It is not possible to tell which locking pin is effective in each individual case. Due to the freely movable position of the locking elements in the core, it is almost impossible to scan a milling pattern for a duplicate key. In addition, the springless function protects against impact picking.

- **Drilling protection**

The carbide metal side control bar, the core drilling protection and the body drilling protection in the 4KS cylinder offer effective protection against drilling.

- **Pulling and tear-off protection**

The carbide metal side control bars and the modular design (SYMO) have a high protective effect against pulling and tear-off attempts.

- **Impact key protection**

With this complicated opening method, burglar professionals use a so-called impact key to try to bring the query positions in the cylinder into the correct position.

## The material TITALIUM™

The TITALIUM™ padlocks from security expert ABUS represent a new dimension in security! Manufactured from an innovative material, they stand for high security with a greatly reduced weight. The material TITALIUM™ is based on a light aluminium special alloy, which shines with its strong robustness and lightness at the same time. The special steel shackle is coated with NANO PROTECT™ for very high corrosion protection.

\* this selection extends the delivery time